



U.S. Department of Energy

Energy Efficiency and Renewable Energy*Bringing you a prosperous future where energy is clean, abundant, reliable, and affordable*

EERE

[Home](#) | [Site Map](#) | [A-Z Index](#) | [EERE Information Center](#)

Ocean



Ocean Organizations & Resources

- › U.S. Department of Energy
- › U.S. State & Local
- › U.S. Trade & Nonprofit
- › U.S. Universities and Research Institutes
- › International Organizations
- › Discussion Groups
- › Newsletters & Magazines
- › Products & Services

Ocean Topics

Ocean energy draws on the energy of ocean waves, tides, or on the thermal energy (heat) stored in the ocean.

[More basic information about ocean energy is also available.](#)

Technologies

[Wave Energy](#)

The total power of waves breaking on the world's coastlines is estimated at 2 to 3 million megawatts. In favorable locations, wave energy density can average 65 megawatts per mile of coastline.

[Tidal Energy](#)

Tidal energy traditionally involves erecting a dam across the opening to a tidal basin. The dam includes a sluice that is opened to allow the tide to flow into the basin; the sluice is then closed, and as the sea level drops, traditional hydropower technologies can be used to generate electricity from the elevated water in the basin. Some researchers are also trying to extract energy directly from tidal flow streams.

[Ocean Thermal Energy Conversion \(OTEC\) Systems](#)

A great amount of thermal energy (heat) is stored in the world's oceans. Each day, the oceans absorb enough heat from the sun to equal the thermal energy contained in 250 billion barrels of oil. OTEC systems convert this thermal energy into electricity — often while producing desalinated water.

Ocean News

- [DOE to Guarantee Billion in Loans for Clean Energy Projects](#)
August 07, 2006
- [DOE Small Business Awards Reveal Cutting-Edge Research Topics](#)
August 02, 2006
- [G8 Leaders Address Global Energy Security and Climate Change](#)
July 19, 2006

[EERE Home](#) | [U.S. Department of Energy](#)
[Webmaster](#) | [Web Site Policies](#) | [Security & Privacy](#) | [FirstGov.gov](#)

Content Last Updated: 08/10/2006